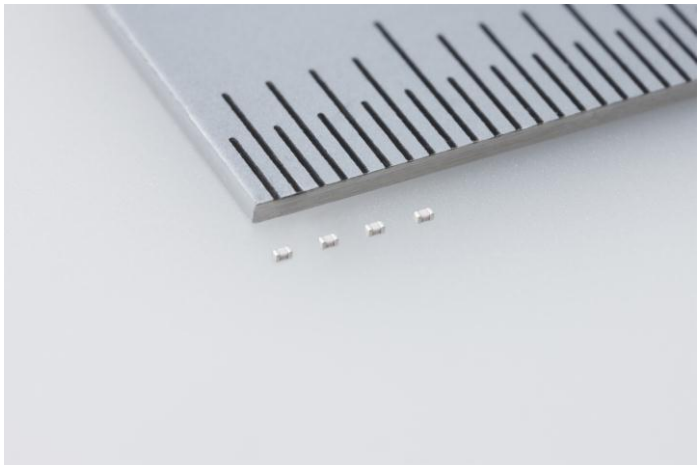
For immediate release

TAIYO YUDEN Announces the EIA 01005 Size High Frequency Multilayer Ceramic Capacitor with a Rated Voltage of 25V

An Industry Leading Q Value with Narrow Capacitance Deviation and Narrow Pitch



TOKYO, August 23, 2012 – TAIYO YUDEN CO., LTD. today announced the commercial release of the TVS042 series of EIA 01005 size high frequency multilayer ceramic capacitors aimed at small mobile devices such as smartphones and tablet PCs. The release of this series, with its ever-decreasing small size and low profile and increasing high functionality, further enhances TAIYO YUDEN's products in the market as the industry leading Q value for the industry's top rated voltage of 25V.

The new series is used in impedance matching applications for the high frequency circuits of high performance small mobile devices like smartphones, which are currently adopting the next-generation communications standard LTE and becoming progressively more multiband. Compared to TAIYO YUDEN's conventional product UVK105 CH0R3BW-F (1.0 x 0.5 x 0.5mm, 0.3pF capacitance), with TVS042 CH0R3BC-W (0.3pF capacitance), a volume ratio miniaturization of about 93% has been made possible. And, the EIA 01005 size high frequency multilayer ceramic capacitor realizes the industry's top rated voltage of 25V and the industry leading Q value.

Production will commence at the company's Tamamura Plant in Gunma Prefecture, Japan, from August 2012, at a production rate of 10 million units per month. The sample price is 5 yen per unit.

Technology Background

The increasing high functionality and multi-functionality of small mobile devices such as smartphones and tablet PCs is being accommodated inside densely-packed casings which continuously get smaller and thinner. There is strong demand in the market for the miniaturization of electronic components in high frequency circuits and high frequency modules and a continuing transition to EIA 01005 size high frequency multilayer ceramic capacitors and high frequency multilayer chip inductors is a critical solution to this market demand.

The miniaturization of conventional high frequency multilayer ceramic capacitors degrades the rated voltage and the Q value. To facilitate the commercialization of the EIA 01005 size high frequency multilayer ceramic capacitor, along with newly-developed materials, TAIYO YUDEN re-engineered the structural design. We were then able to realize the industry leading Q value for the industry's top rated voltage of 25V. The TVS042 series also provides narrow capacitance deviation and narrow pitch.

In the future, TAIYO YUDEN is committed to providing products that meet market needs, to continuing to expand its product line-up, and to focus its efforts, in particular, on developing high frequency electronic components.

This product will be exhibited in the TAIYO YUDEN booth at "CEATEC JAPAN 2012" to be held at the Makuhari Messe (Mihama-ku, Chiba-City, Chiba Prefecture) from the 2nd of October of this year.

■Applications

In impedance matching applications for the high frequency circuits of small mobile devices such as smartphones and tablet PCs.

The main characteristics of the high frequency multilayer ceramic capacitor released this time are as follows (40 models in all).A symbol representing the capacitance tolerance (B, C, D, G, J) goes in the □ in the ordering code.

Ordering code	Rated voltage (DC)	Temperature characteristics	Capacitance	Capacitance tolerance	Q(at 1GHz) (min.)
TVS042 CH0R2□C-W	25V	CH	0.2 pF	B/C ±0.1pF/±0.25pF	300
TVS042 CH0R3□C-W	25V	CH	0.3 pF		300
TVS042 CH0R4□C-W	25V	CH	0.4 pF		300
TVS042 CH0R5□C-W	25V	CH	0.5 pF		300
TVS042 CH0R6□C-W	25V	CH	0.6 pF		300
TVS042 CH0R7□C-W	25V	CH	0.7 pF		300
TVS042 CHR75□C-W	25V	CH	0.75 pF		300
TVS042 CH0R8□C-W	25V	CH	0.8 pF		300
TVS042 CH0R9□C-W	25V	CH	0.9 pF		300
TVS042 CH010□C-W	25V	CH	1.0 pF		300
TVS042 CH1R1□C-W	25V	CH	1.1 pF		280
TVS042 CH1R2□C-W	25V	CH	1.2 pF		270
TVS042 CH1R3□C-W	25V	CH	1.3 pF		260
TVS042 CH1R5□C-W	25V	CH	1.5 pF		240
TVS042 CH1R6□C-W	25V	CH	1.6 pF		230
TVS042 CH1R8□C-W	25V	CH	1.8 pF		210
TVS042 CH020□C-W	25V	CH	2.0 pF		190
TVS042 CH2R2□C-W	25V	CH	2.2 pF		180
TVS042 CH2R4□C-W	25V	CH	2.4 pF		170
TVS042 CH2R7□C-W	25V	CH	2.7 pF		150
TVS042 CH030□C-W	25V	CH	3.0 pF		130
TVS042 CH3R3□C-W	25V	CH	3.3 pF		120
TVS042 CH3R6□C-W	25V	CH	3.6 pF		110
TVS042 CH3R9□C-W	25V	CH	3.9 pF		100
TVS042 CH040□C-W	25V	CH	4.0 pF		90
TVS042 CH4R3□C-W	25V	CH	4.3 pF		85
TVS042 CH4R7□C-W	25V	CH	4.7 pF		85
TVS042 CH050□C-W	25V	CH	5.0 pF		80
TVS042 CH5R1□C-W	25V	CH	5.1 pF	C/D ±0.25pF/±0.5pF	75
TVS042 CH5R6□C-W	25V	CH	5.6 pF		70
TVS042 CH060□C-W	25V	CH	6.0 pF		65
TVS042 CH6R2□C-W	25V	CH	6.2 pF		65
TVS042 CH6R8□C-W	25V	CH	6.8 pF		60
TVS042 CH070□C-W	25V	CH	7.0 pF		60
TVS042 CH7R5□C-W	25V	CH	7.5 pF		55
TVS042 CH080□C-W	25V	CH	8.0 pF		55
TVS042 CH8R2□C-W	25V	CH	8.2 pF		50
TVS042 CH090□C-W	25V	CH	9.0 pF		50
TVS042 CH9R1□C-W	25V	CH	9.1 pF		45
TVS042 CH100□C-W	25V	CH	10 pF	G/J, ±2%/±5%	45